Model 1000W1000C,
M1 through M5
1000 Watts CW
80MHz–1000MHz

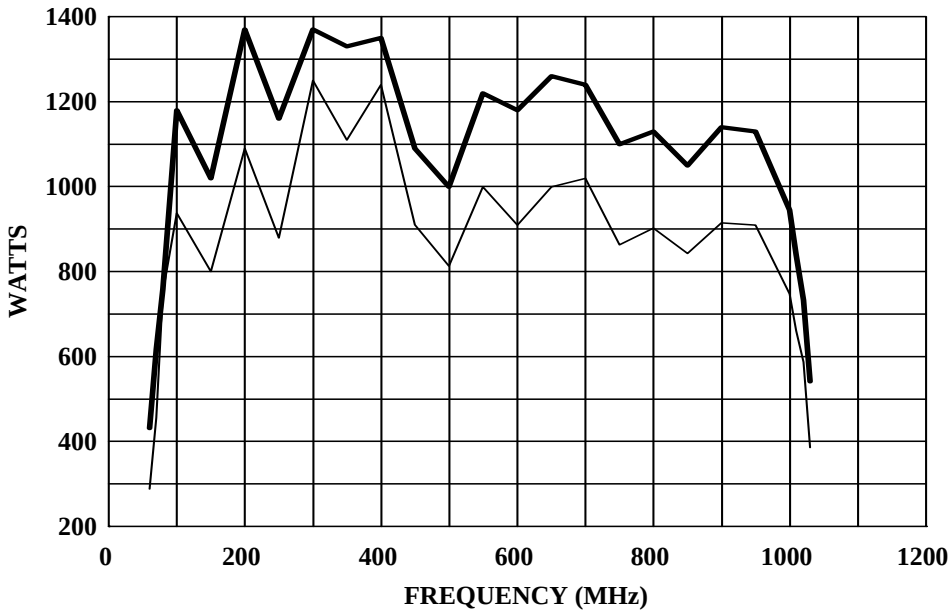
The Model 1000W1000C is a self-contained, air-cooled, broadband, completely solid-state amplifier designed for applications where instantaneous bandwidth and high gain are required. Push-pull circuitry is utilized in all high power stages in the interest of lowering distortion and improving stability. The Model 1000W1000C, when used with an RF sweep generator, will provide a minimum of 1000 watts of swept power.

The Model 1000W1000C is equipped with a Digital Control Panel (DCP) which provides both local and remote control of the amplifier. The DCP uses a digital display, menu assigned softkeys, a single rotary knob, and four dedicated switches (POWER, STANDBY, OPERATE and FAULT/RESET) to offer extensive control and status reporting capability. The display provides operational presentation of Forward Power and Reflected Power plus control status and reports of internal amplifier status. Special features include a gain control, internal/external automatic level control (ALC) with front panel control of the ALC threshold, pulse input capability and RF output level protection. Also included is an internal RF detector that provides an output for use in self-testing or operational modes.

All amplifier control functions and status indications are available remotely in GPIB/IEEE-488 format and RS-232 hardware, and fiber optic. The buss interface connector is located on the back panel and positive control of local or remote operation is assured by a keylock on the front panel of the amplifier.

The 1000W1000C is housed in a single equipment rack and is designed to provide complete stand-alone performance for RF testing. It is also configured to be used as a sub-amplifier in a 2000-watt, 3000-watt or 4000-watt higher power amplifier. It can be added to in an incremental fashion to become a part of these higher power units yet still be used as a stand-alone 1000 watt amplifier.

1000W1000C TYPICAL POWER OUTPUT



SPECIFICATIONS, 1000W1000C

RATED OUTPUT POWER .....1000 watts minimum

INPUT FOR RATED OUTPUT.....1.0 milliwatt maximum

POWER OUTPUT @ 3 dB compression
- Nominal .....1150 watts
- Minimum .....850 watts

POWER OUTPUT @ 1 dB compression
- Nominal .....920 watts
- Minimum .....700 watts

FLATNESS.....± 2.0 dB
± 0.8 dB with internal leveling

FREQUENCY RESPONSE .....80 - 1000 MHz instantaneously

GAIN (at maximum setting) .....60 dB minimum

GAIN ADJUSTMENT (continuous range).....18 dB minimum

INPUT IMPEDANCE.....50 ohms, VSWR 2.0:1 maximum

OUTPUT IMPEDANCE .....50 ohms nominal

MISMATCH TOLERANCE* .....100% of rated power without foldback up to 6.0:1 mismatch above which may limit to 500 watts reflected power. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.

MODULATION CAPABILITY.....Faithfully reproduces AM, FM, or Pulse modulation appearing on input signal.

HARMONIC DISTORTION.....Minus 20 dBc maximum at 800 watts

THIRD ORDER INTERCEPT POINT .....66 dBm typical

RF POWER METER.....0 - 1200 watts full scale

PRIMARY POWER (specify voltage).....200 - 240 VAC, Delta Connected (4 wire)
360-435 VAC, Wye Connected (5 wire)
50/60 Hz, 3 phase
12kVA Maximum

CONNECTORS
- RF Input .....Type N female rear panel (See model configurations)
- RF Output .....See model configurations
- External Leveling Inputs .....Type BNC female on front panel
- Pulse Modulation Input .....Type BNC female on front panel
- Detected RF Output .....Type BNC female on front panel
- Remote Computer Interface .....24 Pin female IEEE-488 (GPIB) and RS-232 connector on rear panel
- Remote Computer Interface (fiber optic) .....ST Conn Tx and Rx RS-232
- Safety Interlock.....15 pin Subminiature D on rear panel
- Operate Interface.....27 pin Subminiature D on rear panel

COOLING.....Forced air (self contained fans) see Model Configurations

WEIGHT (approximate) .....340 kg (750 lb)

SIZE (W x H x D).....68.8 x 152.5 x 82.5 cm (27.1 x 60.0 x 32.5 in)

*See Application Note #27

MODEL CONFIGURATIONS

Model Number	RF Input connectors	RF Output connectors	Cooling Air
1000W1000C	Rear panel	Type 7/16 female on rear panel	Enters front and bottom
1000W1000CM1	Features of 1000W1000CM1 incorporated into standard design.		
1000W1000CM2	Same as 1000W1000C, but gain is max @ turn-on.		
1000W1000CM3	Same as 1000W1000C, but tested for harmonic distortion from 400MHz–1GHz, minus 20 dBc maximum at 1000 watts. Test data to be included.		
1000W1000CM4	Front panel	Type 7/16 female on front panel	Enters front and bottom
1000W1000CM5	Front panel	Type C female on front panel	Enters front and bottom